Welcome to EECB 703

PRINCIPLES OF ECOLOGY, EVOLUTION, AND CONSERVATION BIOLOGY

### Course Meetings (3 credits)

**TIME**: Tues at noon (3 hours)  
**PLACE**: **MS 227** [**(Mackay Science Building)**](https://www.unr.edu/around-campus/mackay-science)

**Instructor:** Kevin Shoemaker  
- **Office**: FA 220E  
- **Phone**: (775) 682-7449  
- **Email**: [kshoemaker@cabnr.unr.edu](mailto:kshoemaker@cabnr.unr.edu)  
- **Skype**: kevin.t.shoemaker  
- **Office hours**: Immediately before class meetings, and by appointment

**Course Website**: [naes.unr.edu/shoemaker/teaching/EECB-703](http://naes.unr.edu/shoemaker/teaching/EECB-703/index.html)

**Texts**: Readings from the primary literature (see [course calendar](Calendar.html) and this [Google Doc](https://docs.google.com/document/d/1VkpM0Mn4-rWlnWKV_EqKXxwHbXxZWWWWC4jCEDZXlSY/edit?usp=sharing))

### Class description

This class will provide a broad overview of the diverse subdisciplines that fall under the “Ecology, Evolution and Conservation Biology” umbrella. You will be exposed to a broad range of ecological and evolutionary principles, including applications in management and conservation. Both historical and contemporary research is emphasized. Readings are drawn exclusively from the primary literature. This course serves as a foundation for other, more specialized courses offered through the Ecology, Evolution and Conservation Biology (EECB) graduate program. Topics will be introduced by guest experts, most of whom are part of the EECB faculty.

Specific topics to be covered include: physiological ecology, behavioral ecology, population ecology, natural selection and population structure, genomics research, epigenetics, speciation and macroevolution, phylogenetic reconstruction and the comparative method, community ecology, conservation, management and restoration, philosophy of science and biology, quantitative methods in ecological research.

### Learning outcomes

Outcomes of this class will include the following:

1. Students will be exposed to a broad range of ecological and evolutionary principles, including applications in management and conservation.
2. Students will develop skills in critical thinking and communication through participation in and leadership of in-class discussions.
3. Students will gain skills in preparing for written and oral exams at the graduate level.

### Grading

Your grade for this course will be based on the following:

* Participation (70%)
* Final Exam (30%)

*Grading scale*: A (100â€“93), A- (92â€“90), B+ (89â€“87), B (86â€“83), B- (82â€“80), C+ (79â€“77), C (76â€“73), C- (72â€“70), D+ (69â€“67), D (66â€“63), D- (62â€“60), F (below 60)

### Final exam

The final exam will consist of short essay questions reflecting the diversity of material covered. Please keep your answers to approximately 300-600 words, write in complete sentences and avoid bulleted lists.

Given the huge diversity of questions involved, it is not possible to develop a detailed rubric for each. Exam answers for each question will be assigned a score of 1 to 5, corresponding to poor (1), fair (2), good (3), very good (4), and excellent (5).

In general, the best answers (“5”) will have the following characteristics: they will answer all parts of the question with accurate information, included insightful opinions where appropriate, and will be written in an articulate manner.

Second best answers (“4”) may lack one of those properties, but will otherwise be on point and demonstrate depth of thought and understanding.

Questions scoring below that might have something factually wrong, or might have just been written in a way that was difficult to follow.

This is a difficult exam- there is a huge amount of material and not a lot of time (you can expect to type for the full 3 hours).

### Participation

As discussed above, a major learning objective of this course is to develop skills in critical thinking and communication. The ability to intelligently discuss challenging issues is essential to success in graduate school, and out aim is to give you a jump start with this course. Come prepared every day to contribute.

### Readings

The majority of the readings you will do in this class will be from the primary literature, as listed on the [“Readings and Questions” document](https://docs.google.com/document/d/1VkpM0Mn4-rWlnWKV_EqKXxwHbXxZWWWWC4jCEDZXlSY/edit?usp=sharing) on a weekly basis. You can expect to read approx. 4 papers per week. You are expected to seek out any additional references for areas that you feel you need help with.

### Academic dishonesty

Academic dishonesty (cheating, plagiarism or other dishonest behavior related to grades and performance) will not be tolerated under any circumstances.

### Disability resources

I encourage any student needing accommodations for a specific disability to please meet with me at their earliest convenience to ensure timely and appropriate accommodations.

### Statement on Audio and Video Recording

Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may be given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.